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| **Course-32 Title: Database System Sessional** |  |
| **Course No.:CCE-224 Credit : 1.50 Contact Hours: 2** | **Total Marks: 100** |

**11.1 Rationale:**

A computer engineer needs to know the fundamentals of database architecture, database management systems, and database systems, principles and methodologies of database design, and techniques for database application development.

**11.2 Objectives:**

1. an understanding of the needs for and uses of database management systems in business;
2. an understanding of the context, phases and techniques for designing and building database information systems in business;
3. an understanding of the components of a computerized database information system (application)
4. an ability to correctly use the techniques, components and tools of a typical database management system -- such as Access 2000 or Oracle 8i -- to build a comprehensive database information system (application);
5. an ability to design a correct, new database information system for a business functional area and implement the design in either Access 2000 or Oracle 8i;
6. an introductory understanding of some advanced topics in database management, e.g., object-relational databases and design, distributed databases, database administration (security, backup and restore, tuning) and data warehousing.

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| **11.3**  **Learning Outcomes** | **11.4**  **Course Content** | **11.5**  **Teaching Strategy/ Learning Experience** | **11.6 Assessment Strategy** |
| * Learn system configuration | Configure system for database programming | **Exercise** | **Practice and coding** |
| * Apply database basic function | Create Database, table ,learn data types | **Exercise** | **Practice and coding** |
| * Demonstrate SQL | Learn SQL | **Exercise** | **Practice and coding** |
| * Apply SQL to write database program | Apply SQL to retrieve, insert, update and delete data | **Exercise** | **Practice and coding** |
| * Demonstrate advance SQL and apply it | Learn Advanced SQL | **Exercise** | **Practice and coding** |
| * Design large database model with proper table organization | Learn normalization | **Exercise** | **Practice and coding** |
| * Apply database triggering | Learn database triggering | **Exercise** | **Practice and coding** |
| * Develop database design | Learn database design | **Exercise** | **Practice and coding** |